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Appn. Number 10/599,384 (Palacios) GAU 2169

Amnt. A contd.

4 of 38

**CLAIMS:** The following is a listing of all claims in the application with their status and the text of all active claims.

1. (CURRENTLY AMENDED) A computerized classification system, [comprising the following means] comprising:
  - (a) a processor, for organizing entities that have different types,
  - (b) means for organizing some or all of said entities in a tree, with parent-child relationships, so that said entities correspond to the nodes of said tree, where it is not necessary that a graphical representation of said tree exists,
  - (c) means for managing, at least, category-entities and criterion-entities, and optionally also instance-entities,
  - (d) a memory, for storing the data associated to said entities,

wherein:

  - i said instance-entities [might] correspond to objects, concepts, events, characteristics, ideas or [other entity type] any type of object belonging to any realm of reality,
  - ii the purpose of said category-entities is to create different classes to which said instance-entities can be assigned,
  - iii the purpose of said criterion-entities is to create different classification criteria, after which different category-entities can be created,
  - iv [said criterion-entities can be child nodes of the category entities could alternate, so that a criterion entity could be the parent of a category entity and vice versa, and a criterion entity can be parent of other criterion entities,]
  - v at least one of said criterion-entities is:
    - a. the child node of one of said category entities, or
    - b. the child node of another one of said criterion entities, or
    - c. the child node of one of said category entities and the child node of another one of said criterion entities.
  - vi at least one of said criterion-entities does not belong to a group of criterion nodes associated to the feature of criteria replication.

wherein said system can be of different types, such as for example one of the following ones:

- an independent computerized system that comprises a screen and other means;
- a computerized system that might not have a screen but which comprises telecommunication means for the user of the invention to connect with said system, in a way that in order for said

~~user to establish said connection, said user might use a second computerized system that might have a screen;~~

~~— a different type of system with different characteristics.~~

2. (CURRENTLY AMENDED) The [A] system as claimed in claim 1, further comprising means for showing an arboreal structure that represents said tree, ~~[wherein there might exist different ways to implement said arboreal structure,]~~ wherein ~~[it is possible that]~~ all of the instance-entities, or only part of them, or none of them appear in said arboreal structure, where it happens that:  
i—~~the instance entities that appear in said arboreal structure could be represented as belonging to all the category entities to which they belong or only to some of them;~~  
ii—~~in said arboreal structure, the criterion entities and the category entities could alternate, so that a criterion entity could be the parent of a category entity and vice-versa, and a criterion entity can be parent of other criterion entities,]~~  
~~and wherein in [such] said arboreal structure, the category-instances that are child nodes of criterion-instances can have the same level of indentation or a different level of indentation as said parent criterion-instances.~~

3. (CANCELED)

4. (CURRENTLY AMENDED) The [A] system as claimed in claim 2, further comprising means for emphasizing the criterion-entities with respect to the rest of entities in said structure, wherein said means ~~[could be for example]~~ comprises one or more of the following means: a special text, a special font type, or a special font format ~~[, or other means]~~.

5. (CANCELED)

6. (CANCELED)

7. (CANCELED)

8. (CURRENTLY AMENDED) The [A] system as claimed in claim 2, further comprising means for modifying said tree wherein said modifying comprises adding or removing entities ~~[—such as for example for adding or removing entities — without requiring to modify the number of controls that exist in the graphical interface in which said arboreal structure is shown, so that the only~~

~~modification that is necessary to make is to modify the set of nodes that exist in said arboreal structure.}~~

9. (CURRENTLY AMENDED) The [A] system as claimed in claim 2, ~~[further comprising means for categorizing instance entities in such a way that the user adds an instance entity in different positions of said arboreal structure and said system creates a classification for said instance entity that reflects the category entities that appear as parent node of said instance entity.] further comprising:~~

- (a) means for adding at least one instance-entity as child node of one or more category-entities,
- (b) means for identifying said one or more category-entities,
- (c) means for creating a classification string that comprises the codes of said one or more category-entities,
- (d) means for assigning said classification string to said instance-entity.

10. (CANCELED)

11. (CURRENTLY AMENDED) The [A] system as claimed in claim 1, further ~~[comprising]~~ comprising:

- (a) means for adding at least one instance-entities as child nodes of one or more category-entities,
- (b) means for identifying the criterion-entities that are complete, incomplete and neutral, for said instance entities,

so that the user can assess whether there exist too many selected category-entities or too few, in order to make a correct ~~[categorization]~~ classification of one or more instance-entities.

12. (CURRENTLY AMENDED) The [A] system as claimed in claim 1, further [comprising means for performing searches on instance-entities, so that the search strings are built after one or more category-entities or instance-entities that might have been selected.] comprising:

- means for choosing one or more category-entities
- means for identifying the codes that are associated to said one or more category-entities that have been chosen.
- means for creating a search string which comprises said codes and optionally one or more boolean operators.

13. (CURRENTLY AMENDED) The [A] system as claimed in claim 1, further comprising:

- means for classifying instance-entities by using [certain] classification strings, wherein:
  - said classification strings are character strings,
  - said classification strings are characterized by being a concatenation of [the] a plurality of codes [assigned to said instance-entities], wherein said plurality of codes [can be of several types, such as for example] comprises one or more of the following types of codes:  
codes of one or more of the category-entities to which each instance-entity is assigned,  
codes of one or more of the criterion-entities [to which said category-entities belong]  
which are ancestor nodes to said category-entities,  
[other types of codes,]
  - said classification strings comprise certain separating characters that allow to distinguish where each of the codes starts and ends, with the purpose of eliminating the ambiguity created by the same characters existing in different codes,
- [and wherein there exist] means for storing said classification strings in a database, [so that they can be] either stored in a single field or in several fields in a disaggregated fashion [, and wherein said database can be a relational database or other type of database].

14. (CURRENTLY AMENDED) The [A] system as claimed in [claim 11] claim 13, [further comprising means for searching instance-entities by using said classification strings, wherein said search is based on finding the instances in whose classification strings there exist certain sets of characters, for which said means can use mechanisms such as the expression "LIKE" of SQL (Structured Query Language) or other similar mechanisms.] further comprising:

- means for creating a database query by adding operators of a database query language, wherein one of these operators can be the operator "LIKE" of SQL (Structured Query Language) and by adding codes of one or more category-entities.

(b) means for executing a search over instance-entities by applying said database query to said field or fields of instance-entities which contain said classification strings.

15. (ORIGINAL) A computerized method for classifying entities of different types, comprising the following steps:

(a) adding category-entities and criterion-entities to the classification and, optionally, also adding instance-entities, wherein

- said instance-entities [~~might~~] correspond to objects, concepts, events, characteristics, ideas or [~~other entity type~~] any type of object belonging to any realm of reality,
- the purpose of said category-entities is to create different classes to which said instance-entities can be assigned,
- the purpose of said criterion-entities is to create different classification criteria, after which different category-entities can be created,

(b) organizing some or all of said entities in a tree, with parent-child relationships, so that said entities correspond to the nodes of said tree, where it is not necessary that a graphical representation of said tree exists, and wherein:

- at least one of said criterion-entities is:
  - the child node of one of said category entities, or
  - the child node of another one of said criterion entities, or
  - the child node of one of said category entities and the child node of another one of said criterion entities,
- at least one of said criterion-entities does not belong to a group of criterion nodes associated to the feature of criteria replication.

[wherein said method is based on a computerized system that can be of different types, such as for example one of the following ones:

- an independent computerized method that comprises a screen and other means,
- a computerized method that might not have a screen but which comprises telecommunication means for the user of the invention to connect with said method, in a way that in order for said user to establish said connection, said user might use a second computerized method that might have a screen,
- a different type of method with different characteristics.]

16. (CURRENTLY AMENDED) The [A] method as claimed in claim 15, further comprising the step of showing an arboreal structure that represents said tree, [wherein there might exist different

~~ways to implement said arboreal structure,] wherein it is possible that all of the instance-entities, or only part of them, or none of them, appear in said arboreal structure, [and where it happens that:~~

- ~~i—the instance-entities that appear in said arboreal structure could be represented as belonging to all the category-entities to which they belong or only to some of them,~~
- ~~ii in said arboreal structure, the criterion-entities and the category-entities could alternate, so that a criterion-entity could be the parent of a category-entity and vice versa, and a criterion-entity can be parent of other criterion-entities,]~~

and wherein in [such] said arboreal structure, the category-instances that are child nodes of criterion-instances can have the same level of indentation or a different level of indentation as said parent criterion-instances.

17. (CANCELED)

18. (CANCELED)

19. (CANCELED)

20. (CANCELED)

21. (CANCELED)

22. (CURRENTLY AMENDED) The [A] method as claimed in claim 16, further comprising the step of modifying said tree, wherein said modifying comprises adding or removing entities, [—such as for example for adding or removing entities—without requiring to modify the number of controls that exist in the graphical interface in which said arboreal structure is shown, so that the only modification that is necessary to make is to modify the set of nodes that exist in said arboreal structure.]

23. (CURRENTLY AMENDED) The [A] method as claimed in claim 16, [further comprising the step of categorizing instance-entities in such a way that the user adds an instance-entity in different positions of said arboreal structure and said system creates a classification for said instance-entity that reflects the category-entities that appear as parent-node of said instance-entity,] further comprising the steps of:

- (a) adding one or more instance-entities as child nodes of one or more category-entities.

- (b) identifying said one or more category-entities.
- (c) creating a classification string that comprises the codes of said one or more category-entities,
- (d) means for assigning said classification string to said instance-entity.

**24. (CANCELED)**

**25. (CURRENTLY AMENDED)** The [A] method as claimed in claim 15, further comprising the steps of:

- (a) adding at least one instance-entities as child nodes of one or more category-entities,
- (b) identifying the criterion-entities that are complete, incomplete and neutral, for said instance entities,

so that the user can assess whether there exist too many selected category-entities or too few, in order to make a correct categorization of one or more instance-entities.

[the step of categorizing instance-entities, where said step comprises the following substeps:

- (a) said classification strings are character strings;
- (b) automatically identifying the criterion-entities that are complete, incomplete and neutral, so that the user can assess whether there exist too many selected category-entities or too few.]

**26. (CURRENTLY AMENDED)** The [A] method as claimed in claim 15, further [comprising the step of performing searches on instance-entities, so that the search strings are built after one or more category-entities or instance-entities that might have been selected.] comprising:

- (a) choosing one or more category-entities
- (b) identifying the codes that are associated to said one or more category-entities that have been chosen
- (c) creating a search string which comprises said codes and optionally one or more boolean operators.

**27. (CURRENTLY AMENDED)** The [A] method as claimed in claim 15, further comprising the [step] steps of:

- (a) classifying instance-entities by using [certain] classification strings, wherein:
  - i said classification strings are character strings,

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Amnt. A contd.

11 of 38

- ii said classification strings are characterized by being a concatenation of [the] a plurality of codes [assigned to said instance entities], wherein said plurality of codes can be of several types, such as for example,] comprises one or more of the following types of codes:
  - codes of one or more of the category-entities to which each instance-entity is assigned,
  - codes of one or more of the criterion-entities [to which said category-entities belong] which are ancestor nodes to said category-entities,
  - [other types of codes.]
- iii said classification strings comprise certain separating characters that allow to distinguish where each of the codes starts and ends, with the purpose of eliminating the ambiguity created by the same characters existing in different codes,

(b) [and wherein said classification strings might be stored] storing said classification strings in a database, [so that they can be stored] either in a single field or in several fields in a disaggregated fashion [, and wherein said database can be a relational database or other type of database].

28. (CURRENTLY AMENDED) The [A] method as claimed in [claim 27] claim 27, [further comprising the step of searching instance entities by using said classification strings, wherein said search is based on finding the instances in whose classification strings there exist certain sets of characters, for which said means can use mechanisms such as the expression “LIKE” of SQL (Structured Query Language) or other similar mechanisms] further comprising the steps of:

- (a) creating a database query by adding operators of a database query language, wherein one of these operators can be the operator “LIKE” of SQL (Structured Query Language) and by adding codes of one or more category-entities.
- (b) executing a search over instance-entities by applying said database query to said field or fields of instance-entities which contain said classification strings.

29. (CANCELED)

30. (CANCELED)

31. (CANCELED)

32. (CURRENTLY AMENDED) A computer program embedded in a computer readable storage medium that, when executed by one or more processors of a computer, allows said one of more processors to perform the method of claim 15. [following steps:

- (a) ~~creating a classification of entities,~~
- (b) ~~adding category entities and criterion entities to the classification and, optionally, also adding instance entities, wherein~~
  - i ~~said instance entities might correspond to objects, concepts, events, characteristics, ideas or other entity type belonging to any realm of reality,~~
  - ii ~~the purpose of said category entities is to create different classes to which said instance entities can be assigned,~~
  - iii ~~the purpose of said criterion entities is to create different classification criteria, after which different category entities can be created,~~
- (c) ~~organizing some or all of said entities in a tree, with parent child relationships, so that said entities correspond to the nodes of said tree, where it is not necessary that a graphical representation of said tree exists.]~~

33. (CURRENTLY AMENDED) A computer readable storage medium containing computer executable instructions that, when interpreted by one or more processors of a computer, allows said one of more processors to perform the method of claim 15. [the following steps:

- (a) ~~creating a classification of entities;~~
- (b) ~~adding category entities and criterion entities to the classification and, optionally, also adding instance entities, wherein~~
  - i ~~said instance entities might correspond to objects, concepts, events, characteristics, ideas or other entity type belonging to any realm of reality,~~
  - ii ~~the purpose of said category entities is to create different classes to which said instance entities can be assigned,~~
  - iii ~~the purpose of said criterion entities is to create different classification criteria, after which different category entities can be created,~~
- (c) ~~organizing some or all of said entities in a tree, with parent child relationships, so that said entities correspond to the nodes of said tree, where it is not necessary that a graphical representation of said tree exists.]~~

34. (NEW) The system of claim 1 wherein at least one of said category entities is the child node of another one of said category entities.

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35. (NEW) The method of claim 15 wherein at least one of said category entities is the child node of another one of said category entities.

36. (NEW) The method as claimed in claim 16, further comprising the step of emphasizing the criterion-entities with respect to the rest of entities in said structure, wherein said step comprises one or more of the following substeps: a special text, a special font type, or a special font format.